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EXAMINER

YAARY, MICHAEL D

ART UNIT	PAPER NUMBER
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2193

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/699,057

Applicant(s)

DILLENBURG ET AL.

Examiner

Michael Yaary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 and 24-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05/16/2007.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

1. Claims 1-22 and 24-33 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4-7, and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kittross et al. (hereafter Kittross)(US Pat. 6,681,351) in view of Mutchler et al. (hereafter Mutchler)(US Pat. 6,689,157).
4. Kittross and Mutchler were cited in the previous office action dated 01/18/2007.
5. **As to claim 1**, Kittross discloses a method for distributing software components to computer stations that analyze products (abstract), said method comprising:
Obtaining a software component including information used by a computer station which communicates with a test station to analyze a product (Column 4, lines

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48-58 and figure 1 disclose the claimed computer station and test station as disclosed by the instant application in figure 1 and [0014] of the specification. The computer station containing memory and being a part or a subset of the test station, which is made up of the computer station, product, and instrument. Figure 1 of Kittross discloses the test station as a whole containing a computer station. Column 4, lines 48-58 disclose how the ATE (test equipment or test station) obtains a test procedure from memory (obtaining it from the computer station part of the test station), thus reading on how the computer station communicates with test station for obtaining software components.).

6. Kittross does not disclose distributing the software component to the computer station based on at least one of an identification of the test station and an identification of the product.

However, Mutchler discloses distributing the software component to the computer station based on at least one of an identification of the test station and an identification of the product (Column 1, lines 42-55 disclose installing and configuring test files for a device under test based on identification information).

7. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kittross, by configuring files for a device based on identifying information, as taught by Mutchler, for the benefit of providing

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greater efficiency in processing as one would be motivated to make the combination in order to reduce the time for configuration and distribution.

8. **As to claim 4**, Kittross further discloses the obtaining being done by downloading at the computer station a test program set, said test program set directing the computer station to analyze the product, and said test program set being uniquely associated with the product and being associated with the computer station (column 4, lines 7-12 and 55-58).
9. **As to claim 5**, Kittross further discloses an instrument is used to test the product (column 6, lines 45-47), said obtaining step comprises downloading at the computer station a test program set, said test program set directing the computer station to analyze the product, and said test program set being uniquely associated with the product and being associated with the computer station and the instrument (column 4, lines 7-12 and 55-58).
10. **As to claim 6**, Kittross further discloses testing the product with an instrument based on the software component, wherein the instrument is at least one of a power supply, a communication analyzer, a signal generator, and a frequency counter (column 6, lines 45-47 and column 11, lines 25-30 disclose a power supply).

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11. **As to claim 7**, Mutchler discloses downloading at the computer station at least one of a communication file, a configuration file, a calibration file, a test executive file, a test sequence file, a specification file, and a test step execution file (Column 4, lines 38-42 disclose a configuration file).

12. **As to claim 10**, Mutchler discloses analyzing at least one of a printed circuit board assembly, a combination of the printed circuit board assemblies, a module, a circuit pack, a field replaceable unit (FRU), a processor, a memory, and a cable (Unit under test 105 of figure 9).

13. **As to claim 11**, Kittross further discloses storing, in a database, multiple test program sets (column 4, lines 7-12), each of which includes at least one test step execution file that identifies steps to be executed by an instrument configured to test the product, wherein said obtaining step comprises accessing the test step execution file (column 3, lines 58-66).

14. **As to claim 12**, Mutchler discloses accessing, by computer station, a management file server to download software component updates (column 1, lines 43-56).

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15. Claims 2, 3, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kittross in view of Mutchler as applied to claim 1 above, and further in view of Proskauer (US Pat. 5,828,674).

16. Proskauer was cited in the previous office action dated 01/18/2007.

17. **As to claim 2**, Kittross and Mutchler do not disclose the obtaining being done by downloading, to the computer station, an equipment file set including said software component, said equipment file set directing the computer station to operate an instrument, said equipment file set being uniquely associated with the computer station and independent of the product.

However, Proskauer discloses an equipment file set including said software component, said equipment file set directing the computer station to operate an instrument, said equipment file set being uniquely associated with the computer station and independent of the product (Column 5, line 66-column 6, line 4 disclose individual driver software (equipment file set) associated with handlers (instruments) used for operation in a particular workstation, regardless of the product tested.).

18. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kittross and Mutchler, by associating specific drivers for different equipment handlers at different workstations as taught by

Proskauer, for the benefit of creating smaller and more simple driver modules for instrument control (Proskauer column 6, lines 5-6).

19. **As to claim 3**, Proskauer discloses an instrument used to test the product (handler 2004 of figure 2) and said obtaining step comprises downloading at the computer station an equipment file set including said software component, said equipment file set directing the computer station to analyze the product, said equipment file set being uniquely associated with the computer station and the instrument and said equipment file set being independent of the product (Column 5, line 66-column 6, line 4 disclose individual driver software (equipment file set) associated with handlers (instruments) used for operating the instrument in a particular workstation, thus controlling and analyzing the product, regardless of what product is tested.).

20. **As to claim 8**, Kittross discloses a database for storing software components (test element database 36 of figure 1). Kittross and Mutchler do not disclose storing in a database multiple equipment file sets, each equipment file set including at least one file identifying communications protocols between the computer station, the product and the instrument used to test the product.

However, Proskauer discloses multiple equipment file sets (Column 5, line 66-column 6, line 4 disclose individual driver software (equipment file set) associated with handlers (instruments) used for operating the instrument in a particular workstation, thus controlling and analyzing the product), each equipment file set including at least one file

identifying communications protocols between the computer station, the product and the instrument used to test the product (Column 6, lines 21-27 and lines 34-39 disclose the way communication is done in the test station environment, thus providing a communications protocol.).

21. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kittross and Mutchler by having equipment file sets including communication protocols for the testing system as taught by Proskauer, for the benefit of successfully running multiple types of tests and making sure proper synchronization is attained between all elements of the testing system.

22. **As to claim 9**, Kittross discloses a database for storing multiple software components (test element database 36 of figure 1). Kittross and Mutchler do not disclose that being stored are multiple equipment file sets, and each equipment file set including at least one file identifying a calibration for an instrument to be used by the computer station to analyze the product.

However, Proskauer discloses multiple equipment file sets (Column 5, line 66- column 6, line 4 disclose individual driver software (equipment file set) associated with handlers (instruments) used for operating the instrument in a particular workstation, thus controlling and analyzing the product), and each equipment file set including at least one file identifying a calibration for an instrument to be used by the computer station to

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analyze the product (Column 6, lines 24-27 disclose programming the handler (instrument) appropriately, thus calibrating accordingly for testing).

23. Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Kittross and Mutchler, by including equipment file sets to calibrate and control test instruments as taught by Proskauer, for the benefit of successfully being able to implement an instrument and test station to perform multiple arrays of testing.

24. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kittross in view of Mutchler, as applied to claim 1 above, and further in view of Blitz (US Pat. 6,047,293).

25. Blitz was cited in the previous office action dated 01/18/2007.

26. **As to claim 13**, Kittross and Mutchler do not disclose storing a relationship between the software components, products, instruments, and computer stations.

However, Blitz discloses storing a relationship between the software components, products, instruments, and computer stations (Column 5, lines 54-55 and column 6, lines 11-13 and 38-42 disclose different types of information being stored regarding the Excel workbook. Also it is mentioned that the spreadsheets contain all data required for a test, thus making it obvious that relationship data regarding products,

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instruments, and computer stations would be necessary as they are relevant pieces of information needed for testing.).

27. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kittross and Mutchler by, storing relationships regarding different components of the test system as taught by Blitz, for the benefit of creating an efficient and organized means of accessing relevant information necessary for product testing.

28. **As to claim 14**, Blitz discloses storing in database information identifying multiple products, test stations used to test each product, instruments used to test the products, and fixtures used to hold the products (Data manager 316 in figure 2, and column 5, lines 54-56 disclose how all required data regarding testing is stored in the data manger, thus being obvious that test station, instrument, and fixture information would be included as their data are required pieces of information necessary for testing.).

29. Claims 15-22, 24, 25, 28, 29, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kittross in view of Proskauer.

30. **As to claim 15**, Kittross discloses a management system database configured to be used with a computer station that operates an instrument (test interface 28 of figure

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1) when analyzing a product (test devices 46-1 – 46-X and test element database 36 of figure 1; abstract, lines 1-3; and column 12, lines 40-41).

31. Kittross does not disclose the database storing software components that are configured to be executed by the computer station to communicate with and operate the instrument in order to analyze the product, said database automatically accessing said software components based on identification of at least one of the computer station, the instrument and the product.

However, Proskauer discloses the database storing software components that are configured to be executed by the computer station to communicate with and operate the instrument in order to analyze the product, said database automatically accessing said software components based on identification of at least one of the computer station, the instrument and the product (Column 6, lines 17-38 disclose how communication is done in a testing environment by the computer station communicating with the handler or instrument, thus providing communication procedures and components that can be stored in the database when combined with the teachings of Kittross.).

32. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kittross, by implementing software components used to communicate with and operate the instruments, as taught by

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Proskauer, in order create a flexible easy to use test system allowing for changes to be made as necessary to the varying testing requirements.

33. **As to claims 16 and 32**, Proskauer discloses said software components are organized into at least one equipment file set defining a station specific test solution to be executed by the computer station to direct the instrument to perform a test solution, said equipment file set being uniquely associated with the computer station and the instrument, said equipment file set being independent of the product (Column 5, line 66-column 6, line 4 disclose individual driver software (equipment file set) associated with handlers (instruments) used for operation in a particular workstation, thus allowing the instrument to perform a particular testing solution, regardless of what product is being tested.)

34. **As to claims 17 and 33**, Kittross further discloses said software components are organized into at least one test program set that defines a product specific test solution to be executed by the computer station to direct the instrument (test interface 28 of figure 1) to perform a test solution on the product (test devices 46-1 – 46-X of figure 1), said test program set being uniquely associated with the product, said test program set being associated with the instrument and the computer station (column 4, lines 7-12 and 55-58).

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35. **As to claims 18 and 25**, Kittross further discloses said software components correspond to at least one of a communication file, a configuration file, a calibration file, a test executive file, a test sequence file, a specification file, and a test step execution file (Column 4, lines 50-54 disclose obtaining instructions for testing, thus a test step execution file).

36. **As to claims 19 and 24**, Kittross further discloses said software components are configured to control the computer station to analyze at least one of a printed circuit board assembly, a combination of printed circuit board assemblies, a module, a circuit pack, a field replaceable unit (FRU), a processor, a memory, and a cable (Column 4, lines 17-19 disclose testing a circuit board.).

37. **As to claim 20**, Proskauer discloses said software components define an equipment file set that, when executed by the computer station, calibrates an instrument to execute a test sequence (Column 6, lines 24-27 disclose programming the handler (instrument) appropriately, thus calibrating accordingly for testing).

38. **As to claim 21**, Kittross discloses a computer station configured to control operation of an instrument (test interface 28 of figure 1) as the instrument analyzes a product (abstract and test devices 46-1 – 46-X of figure 1, automatic test equipment system (ATE) 20 of figure 1), said computer station controlling the instrument based on an equipment file set (column 4, lines 7-12 and 55-58), a test station communicating

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with said computer station and said instrument (Column 4, lines 48-58 and figure 1 disclose the claimed computer station and test station as disclosed by the instant application in figure 1 and [0014] of the specification. The computer station containing memory and being a part or a subset of the test station, which is made up of the computer station, product, and instrument. Figure 1 of Kittross discloses the test station as a whole containing a computer station. Column 4, lines 48-58 disclose how the ATE (test equipment or test station) obtains a test procedure from memory (obtaining it from the computer station part of the test station), thus reading on how the computer station communicates with test station for obtaining software components.); a management system database in communication with said computer station (test interface 28 of figure 1 and column 4, lines 7-47), said database being accessible by said computer station, wherein said computer station controls said instrument during analysis of the product based on said equipment file set (column 4, lines 7-47).

39. Kittross does not disclose said database storing said equipment file set, and wherein said equipment file set includes a set of software components associated with said test station and independent of said product.

However, Proskauer discloses said database storing said equipment file set, and wherein said equipment file set includes a set of software components associated with said test station and independent of said product (Column 5, line 66-column 6, lines 38 disclose equipment file sets associated with handlers (instruments) used for operation in a particular workstation regardless of the product tested, and how communication is

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done in a testing environment by the computer station communicating with the handler or instrument, thus providing communication procedures and components that can be stored in the database when combined with the teachings of Kittross as utilizing a database for storage would provide a more efficient means of organizing components and procedures to be communicated.).

40. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kittross, by utilizing the database of Kittross to store the equipment file set and components taught by Proskauer, for the benefit of providing a more efficient means of organization and storage of the components and procedures to be communicated.

41. **As to claim 22**, Kittross further discloses said computer station controls said instrument during analysis of the product based on said test program set, wherein said test program set is stored by said database and includes a set of software components that are specific to the product and associated with at least one of said computer station and said instrument (column 4, lines 7-47) and Proskauer discloses said computer station controls said instrument during analysis of the product based on said equipment file set (column 5, line 66-column 6, lines 38).

42. **As to claim 28**, Kittross discloses a system for developing software components (abstract, lines 1-10), said system comprising:

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A test station communicating with a computer station (Abstract, lines 1-10 and column 4, lines 48-58 disclose an automatic test equipment system (ATE) consisting of test station communicating with a computer station.) and Proskauer discloses a source code control system permitting a user to develop software components that, when used by said computer station, directs said computer station to control an instrument during analysis of a product, wherein said source code control system is used to develop a relation between an identification of the test station and an identification of the product (column 5, line 66-column 6, line 38 disclose code that is used by a computer station to control an appropriate handler.).

43. **As to claim 29**, Kittross discloses a test program set that is uniquely associated with said product and associated with said test station (Column 4, lines 7-12 disclose tests elements containing instructions to perform specific test on corresponding products to be tested.) and Proskauer discloses an equipment file set that is uniquely associated with said test station and independent of said product (Column 5, line 66-column 6, line 4 disclose individual driver software (equipment file set) associated with handlers (instruments) used for operation in a particular workstation, thus allowing the instrument to perform a particular testing solution that is independent of the product.).

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44. Claims 26, 27, 30, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kittross in view of Proskauer as applied to claim 1 above, and further in view of Blitz.

45. **As to claim 26**, Kittross and Proskauer do not disclose a developer file that enables a user to track relationships between said instrument and computer station.

However, Blitz discloses a developer file that enables a user to track relationships between said instrument and computer station (Column 2, lines 50-54 discloses a workbook (developer file) containing nested levels of device parameter data, thus being capable of tracking relationships between instrument and computer station.).

46. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kittross and Proskauer by, incorporating a spreadsheet workbook for tracking and maintaining data as taught by Blitz, for the benefit of efficiently increasing data retrieval speed during testing.

47. **As to claim 27**, Blitz discloses a pre-release tool that is used to release information generated in a developer file (Column 4, lines 61-68 disclose passing information from the workbook (developer file) to be tested, thus releasing the information.)

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48. **As to claim 30**, Kittross discloses a database (test element database 36 of figure 1) and Blitz discloses a pre-release tool that parses a developer file created by the user to track relationships, wherein said pre-release tool parses to check for data items within said developer file with respect to pre-existing information within said database (Column 2, lines 54-67; and column 4, line 61-column 5, line 5 disclose a data manager storing and analyzing data broken down in the form of a tree and searching the tree for particular data; as well as analyzing the workbook (developer file) for retrieval of appropriate information regarding the device for test.).

49. **As to claim 31**, Blitz discloses a workbook configured to create equipment file sets and test program sets in connection with new solutions configured to test said product (Column 4, lines 8-12 disclose using an Excel workbook used for test development and analysis, thus making it obviously able to create the different file sets, such as EFS and TPS, needed for testing.)

Response to Arguments

1. Applicant's arguments with respect to claims 1-22 and 24-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Yaary whose telephone number is (571) 270-1249. The examiner can normally be reached on Monday-Friday, 8:00 a.m - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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